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FULL ESTIMATED COST                                         0.21       0.21

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FILE COVERS 1907 - 10 Jun 2004  VOL 140 ISS 24
FILE LAST UPDATED: 9 Jun 2004  (20040609/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s butenol
           980 BUTENOL
           148 BUTENOLS
L1        1074 BUTENOL
                (BUTENOL OR BUTENOLS)

=> s l1 and ((copper(w) catalyst) or (zinc (w) catalyst))
        806818 COPPER
           411 COPPERS
        806881 COPPER
                (COPPER OR COPPERS)
        657649 CATALYST
        662215 CATALYSTS
        842663 CATALYST
                (CATALYST OR CATALYSTS)
          8257 COPPER(W) CATALYST
        523861 ZINC
            94 ZINCS
        523880 ZINC
                (ZINC OR ZINCS)
        657649 CATALYST
        662215 CATALYSTS
        842663 CATALYST
                (CATALYST OR CATALYSTS)
          1920 ZINC (W) CATALYST
L2           8 L1 AND ((COPPER(W) CATALYST) OR (ZINC (W) CATALYST))

=> d l2 1-8 kwic

L2   ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2004 ACS on STN
TI   Process for the preparation of alkyl-substituted butenols
AB   . . .  R2CH2CHO in an inert organic solvent, followed by reduction of the
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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 5	FEB 05	German (DE) application and patent publication number format changes
NEWS 6	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS 7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS 8	MAR 03	FRANCEPAT now available on STN
NEWS 9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS 10	MAR 29	WPIFV now available on STN
NEWS 11	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS 12	APR 26	PROMT: New display field available
NEWS 13	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS 14	APR 26	LITALERT now available on STN
NEWS 15	APR 27	NLDB: New search and display fields available
NEWS 16	May 10	PROUSDDR now available on STN
NEWS 17	May 19	PROUSDDR: One FREE connect hour, per account, in both May and June 2004
NEWS 18	May 12	EXTEND option available in structure searching
NEWS 19	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS 20	May 17	FRFULL now available on STN
NEWS 21	May 27	STN User Update to be held June 7 and June 8 at the SLA 2004 Conference
NEWS 22	May 27	New UPM (Update Code Maximum) field for more efficient patent SDIs in CAplus
NEWS 23	May 27	CAplus super roles and document types searchable in REGISTRY
NEWS 24	May 27	Explore APOLLIT with free connect time in June 2004

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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resulting R1CH2CH:CR2CHO in the presence of an, optionally calcined, copper-**zinc catalyst.** Thus, aldol condensation of α-campholenealdehyde with EtCHO gave unsatd. aldehyde I (R = CHO), which was reduced with a calcined copper-**zinc catalyst** in EtOH to give unsatd. alc. I (R = CH2OH). I can be used in perfumes and cosmetic prepns.

ST **butenol** alkyl substituted prepn; aldehyde aldol condensation; campholenealdehyde aldol condensation propionaldehyde; cyclopentenylbutenal prepn redn copper **zinc catalyst**; cyclopentenylbutenol tetramethyl deriv prepn; alkylbutenol perfume component prepn

IT Perfumes
(ingredients; preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

IT Aldol condensation
Reduction
Reduction catalysts
(preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

IT 7440-50-8D, **Copper**, **catalyst** with zinc, uses
7440-66-6D, **Zinc**, **catalyst** with copper, uses
RL: CAT (Catalyst use); USES (Uses)
(preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

IT 123-38-6, Propanal, reactions 4501-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

IT 185738-36-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

IT 185068-68-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of alkyl-substituted **butenols** via reduction of aldehydes with a copper-**zinc catalyst**)

L2 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ST hydroxylation chlorobutene polymer support catalyst; **butenol** copper asym polymer catalyst

IT Hydroxylation
(asym., of chlorobutene to **butenol**, asym. polymeric supports for)

IT Asymmetric synthesis and induction
(of **butenol** by hydroxylation of chlorobutene, asym. polymeric supports for)

IT Hydroxylation catalysts
(stereoselective, ascorbic acid-copper, for chlorobutene to **butenol**, asym. polymeric supports for)

IT 7440-50-8, Copper, uses
RL: CAT (Catalyst use); USES (Uses)
(catalysts, containing ascorbic acid, asym. polymer supports for, for hydroxylation of chlorobutene to **butenol**)

IT 50-81-7, Ascorbic acid, uses
RL: CAT (Catalyst use); USES (Uses)
(catalysts, containing copper, asym. polymer supports for, for hydroxylation of chlorobutene to **butenol**)

IT 31369-44-5 82730-95-8
RL: USES (Uses)
(supports, for ascorbic acid-**copper catalysts**, in hydroxylation of chlorobutene to **butenol**)

L2 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ST copper hydrogenation catalyst thiophene poisoning; crotonaldehyde

hydrogenation catalyst poisoning; **butenol** selectivity
crotonaldehyde hydrogenation
IT 110-02-1, Thiophene
RL: USES (Uses)
(**copper catalysts** poisoned by, in hydrogenation of
crotonaldehyde, activity and selectivity in relation to)
IT 71-36-3P, 1-Butanol, preparation 123-72-8P, Butanal 6117-91-5P, Crotyl
alcohol
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in hydrogenation of crotonaldehyde in presence of
copper catalysts, thiophene poisoning effect on)
IT 4170-30-3, Crotonaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrogenation of, **copper catalysts** for, activity
and selectivity of, thiophene poisoning effect on)

L2 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ST dihydrofuran dihydropyran lithio coupling Grignard; Grignard coupling
organolithium **copper catalyst**; metalate rearrangement
organocuprate; **butenol**; pentenol

L2 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ST senecioaldehyde; prenol oxidn silver **copper catalyst**;
magnesium oxide catalyst prenol oxidn; methylbutenal; butenal methyl;
methylbutenol oxidn; **butenol** methyl oxidn

L2 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ST allyl phosphate Grignard regiochem stereochem; **copper**
catalyst allyl phosphate Grignard; geraniol; butterfly pheromone
dimethyloctenediol; methyloctenediol
IT 106-24-1P 106-25-2P 66113-31-3P 91892-30-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, from (benzyloxymethyl)**butenol** and methylbutenyl
chloride)

L2 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ST dehydrogenation unsatd alc copper; **butenol** dehydrogenation;
aldehyde unsatd
IT Alcohols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrogenation of unsatd., **copper catalysts** for)
IT 763-32-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrogenation of, **copper catalyst** for)

L2 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ST dehydrogenation unsatd alc copper; aldehyde unsatd; **butenol**
dehydrogenation
IT Alcohols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrogenation of unsatd., **copper catalysts** for)

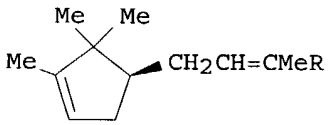
=> d l2 1, 3, 7, 8 ibib, iabs

L2 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:80398 CAPLUS
DOCUMENT NUMBER: 126:89597
TITLE: Process for the preparation of alkyl-substituted
butenols
INVENTOR(S): Markert, Thomas; Porrmann, Volker
PATENT ASSIGNEE(S): Henkel Kgaa, Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19520103	A1	19961205	DE 1995-19520103	19950601
WO 9638401	A1	19961205	WO 1996-EP2212	19960523

W: JP, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRIORITY APPLN. INFO.: DE 1995-19520103 19950601
OTHER SOURCE(S): CASREACT 126:89597; MARPAT 126:89597
GRAPHIC IMAGE:



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ABSTRACT:
Alkylbutenols, R1CH2CH:CR2CH2OH [R1 = C4-16-(un)substituted alkyl, alkenyl, cycloalkyl; R2 = H, C1-6-alkyl] are prepared in high yield and purity via reaction of R1CH2CHO with R2CH2CHO in an inert organic solvent, followed by reduction
of the resulting R1CH2CH:CR2CHO in the presence of an, optionally calcined, copper-**zinc catalyst.** Thus, aldol condensation of α-campholenealdehyde with EtCHO gave unsatd. aldehyde I (R = CHO), which was reduced with a calcined copper-**zinc catalyst** in EtOH to give unsatd. alc. I (R = CH2OH). I can be used in perfumes and cosmetic prepns.

L2 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:410257 CAPLUS
DOCUMENT NUMBER: 117:10257
TITLE: Influence of sulfur poisoning of copper/alumina catalyst on the selective hydrogenation of crotonaldehyde
AUTHOR(S): Hutchings, G. J.; King, F.; Okoye, I. P.; Rochester, C. H.
CORPORATE SOURCE: Leverhulme Cent. Innovative Catal., Univ. Liverpool, Liverpool, L69 3BX, UK
SOURCE: Applied Catalysis, A: General (1992), 83(2), L7-L13
CODEN: ACAGE4; ISSN: 0926-860X
DOCUMENT TYPE: Journal
LANGUAGE: English
ABSTRACT:
The effect of the presence of thiophene (I) on the activity and selectivity of a Cu/Al2O3 catalyst was examined by selective hydrogenation of crotonaldehyde under different reaction conditions. Cu/Al2O3 in the absence of S poisons produced preferentially BuOH, whereas catalysts pre-dosed with a suitable amount of I shifted the product distribution towards formation of crotyl alc. (II). The formation of II under these conditions was favored at low conversions and low temperature, and the maximum selectivity of 64% II was achieved at 80°.

L2 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1976:135120 CAPLUS
DOCUMENT NUMBER: 84:135120
TITLE: β,γ-Unsaturated aldehydes
INVENTOR(S): Ichikawa, Yataro; Naruchi, Tatsuyuki; Yamanaka,

Yoshiyuki; Suzuki, Nobuo; Kabayashi, Osamu; Sooma, Kazuhiko
PATENT ASSIGNEE(S): Teijin, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50135012	A2	19751025	JP 1974-44402	19740422
JP 58020938	B4	19830426		
BE 828169	A1	19750818	BE 1975-155598	19750421
US 4110403	A	19780829	US 1975-569686	19750421
NL 7504754	A	19751024	NL 1975-4754	19750422
FR 2268004	A1	19751114	FR 1975-12486	19750422
DE 2517859	A1	19760311	DE 1975-2517859	19750422
DE 2517859	B2	19770623		
DE 2517859	C3	19850404		
CH 615898	A	19800229	CH 1975-5098	19750422

PRIORITY APPLN. INFO.:
JP 1974-44402 19740422
JP 1974-44403 19740422
JP 1974-111643 19740930

ABSTRACT:
β,γ-Unsatd. alcs. were dehydrogenated over Cu of sp. surface from 0.01 to 1.5 m2/g at 150-300° in a gas phase to give β,γ-unsatd. aldehydes. Thus, CH2:CMeCH2CH2OH was passed over Cu (0.10 m2/g) at 240° at 3.0 g/hr for 3 hr to give 77% conversion and 21 and 19% selectivity to CH2:CMeCH2CHO and Me2C:CCHO, resp.

L2 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1976:135119 CAPLUS
DOCUMENT NUMBER: 84:135119
TITLE: β,γ-Unsaturated aldehydes
INVENTOR(S): Ichikawa, Yataro; Naruchi, Tatsuyuki; Yamanaka, Yoshiyuki; Suzuki, Nobuo; Kabayashi, Osamu; Sooma, Kazuhiko
PATENT ASSIGNEE(S): Teijin, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50135013	A2	19751025	JP 1974-44403	19740422
JP 58020939	B4	19830426		
US 4110403	A	19780829	US 1975-569686	19750421
NL 7504754	A	19751024	NL 1975-4754	19750422
FR 2268004	A1	19751114	FR 1975-12486	19750422
DE 2517859	A1	19760311	DE 1975-2517859	19750422
DE 2517859	B2	19770623		
DE 2517859	C3	19850404		
CH 615898	A	19800229	CH 1975-5098	19750422

PRIORITY APPLN. INFO.:
JP 1974-44402 19740422
JP 1974-44403 19740422
JP 1974-111643 19740930

ABSTRACT:
β,γ-Unsatd. alcs. were dehydrogenated over Cu in the presence of water vapor to give β,γ-unsatd. aldehydes. Thus, CH2:CMeCH2CH2OH

and H2O were passed at 250° and at 20 and 38 g/hr resp. over Cu for 24 hr to give CH2:CMeCH2CHO, Me2C:CCHO, isovaleraldehyde, and saturated isoalcs. at 30, 41, 24, and 3% selectivity resp. The catalyst was prepared by calcining a Cu net at 800° for 3 hr in air, cutting into 2-8 mm pieces, and reducing with a mixture of N and H at 250°.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	27.19	27.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-3.47	-3.47

STN INTERNATIONAL LOGOFF AT 23:22:00 ON 10 JUN 2004

L Number	Hits	Search Text	DB	Time stamp
4	10	butenol same (zinc or copper)	USPAT	2004/06/10 23:23
5	5	butenol and ((zinc or copper) adj1 catalyst)	USPAT	2004/06/10 23:26
6	1	butenol and ((zinc or copper) adj1 catalyst)	EPO; JPO; DERWENT	2004/06/10 23:26